


```
import pandas as pd
mpg= pd.read_csv('https://github.com/YBI-Foundation/Dataset/raw/main/MPG.csv')
```

mpg



	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year	origin
0	18.0	8	307.0	130.0	3504	12.0	70	
1	15.0	8	350.0	165.0	3693	11.5	70	
2	18.0	8	318.0	150.0	3436	11.0	70	
3	16.0	8	304.0	150.0	3433	12.0	70	
4	17.0	8	302.0	140.0	3449	10.5	70	
...	...	...	...	...	...	...	...	...
393	27.0	4	140.0	86.0	2790	15.6	82	

```
car= mpg.copy()
```

car

**mpg cylinders displacement horsepower weight acceleration model\_year ori**

```
mpg= mpg.drop('cylinders', axis= 1)
```

```
mpg.columns
```

```
Index(['mpg', 'displacement', 'horsepower', 'weight', 'acceleration',  
      'model_year', 'origin', 'name'],  
      dtype='object')
```

```
car.columns
```

```
Index(['mpg', 'cylinders', 'displacement', 'horsepower', 'weight',  
      'acceleration', 'model_year', 'origin', 'name'],  
      dtype='object')
```

```
---
```

```
car.info()
```

```
<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 398 entries, 0 to 397  
Data columns (total 9 columns):  
#   Column          Non-Null Count  Dtype  
---  ---  
0   mpg              398 non-null   float64  
1   cylinders        398 non-null   int64  
2   displacement     398 non-null   float64  
3   horsepower       392 non-null   float64  
4   weight           398 non-null   int64  
5   acceleration     398 non-null   float64  
6   model_year       398 non-null   int64  
7   origin           398 non-null   object  
8   name             398 non-null   object  
dtypes: float64(4), int64(3), object(2)  
memory usage: 28.1+ KB
```

```
car.describe()
```

	mpg	cylinders	displacement	horsepower	weight	acceleration
<b>count</b>	398.000000	398.000000	398.000000	392.000000	398.000000	398.000000
<b>mean</b>	23.514573	5.454774	193.425879	104.469388	2970.424623	15.568090
<b>std</b>	7.815984	1.701004	104.269838	38.491160	846.841774	2.757689
<b>min</b>	9.000000	3.000000	68.000000	46.000000	1613.000000	8.000000
<b>25%</b>	17.500000	4.000000	104.250000	75.000000	2223.750000	13.825000
<b>50%</b>	23.000000	4.000000	148.500000	93.500000	2803.500000	15.500000
<b>75%</b>	29.000000	8.000000	262.000000	126.000000	3608.000000	17.175000
<b>max</b>	46.600000	8.000000	455.000000	230.000000	5140.000000	24.800000

```
car[['cylinders', 'origin']].value_counts()
```

```

cylinders  origin
8          usa      103
6          usa       74
4          usa       72
           japan       69
           europe      63
6          japan       6
3          japan       4
6          europe       4
5          europe       3
dtype: int64
```

```
car[['origin']].value_counts()
```

```

origin
usa      249
japan    79
europe   70
dtype: int64
```

```
car['origin'].unique()
```

```
array(['usa', 'japan', 'europe'], dtype=object)
```

```
car['origin'].nunique()
```

```
3
```

```
car.sort_values('displacement')
```

	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year
<b>117</b>	29.0	4	68.0	49.0	1867	19.5	73
<b>71</b>	19.0	3	70.0	97.0	2330	13.5	72
<b>111</b>	18.0	3	70.0	90.0	2124	13.5	73
<b>334</b>	23.7	3	70.0	100.0	2420	12.5	80
<b>131</b>	32.0	4	71.0	65.0	1836	21.0	74
...	...	...	...	...	...	...	...
<b>94</b>	13.0	8	440.0	215.0	4735	11.0	73

```
car.sort_values('displacement', ascending= False)
```

	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year
8	14.0	8	455.0	225.0	4425	10.0	70
95	12.0	8	455.0	225.0	4951	11.0	73
13	14.0	8	455.0	225.0	3086	10.0	70
6	14.0	8	454.0	220.0	4354	9.0	70
7	14.0	8	440.0	215.0	4312	8.5	70
...	...	...	...	...	...	...	...

```
car.sort_values(['displacement', 'weight'], ascending= False)
```

	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year
95	12.0	8	455.0	225.0	4951	11.0	73
8	14.0	8	455.0	225.0	4425	10.0	70
13	14.0	8	455.0	225.0	3086	10.0	70
6	14.0	8	454.0	220.0	4354	9.0	70
94	13.0	8	440.0	215.0	4735	11.0	73
...	...	...	...	...	...	...	...

```
car.describe(include= 'all')
```

	mpg	cylinders	displacement	horsepower	weight	acceleration
count	398.000000	398.000000	398.000000	392.000000	398.000000	398.000000
unique	NaN	NaN	NaN	NaN	NaN	NaN
top	NaN	NaN	NaN	NaN	NaN	NaN
freq	NaN	NaN	NaN	NaN	NaN	NaN
mean	23.514573	5.454774	193.425879	104.469388	2970.424623	15.568090
std	7.815984	1.701004	104.269838	38.491160	846.841774	2.757689
min	9.000000	3.000000	68.000000	46.000000	1613.000000	8.000000
25%	17.500000	4.000000	104.250000	75.000000	2223.750000	13.825000
50%	23.000000	4.000000	148.500000	93.500000	2803.500000	15.500000
75%	29.000000	8.000000	262.000000	126.000000	3608.000000	17.175000

car.T

	0	1	2	3	4	5	6	7	
mpg	18.0	15.0	18.0	16.0	17.0	15.0	14.0	14.0	
cylinders	8	8	8	8	8	8	8	8	
displacement	307.0	350.0	318.0	304.0	302.0	429.0	454.0	440.0	
horsepower	130.0	165.0	150.0	150.0	140.0	198.0	220.0	215.0	
weight	3504	3693	3436	3433	3449	4341	4354	4312	
acceleration	12.0	11.5	11.0	12.0	10.5	10.0	9.0	8.5	
model_year	70	70	70	70	70	70	70	70	
origin	usa	usa	usa	usa	usa	usa	usa	usa	
name	chevrolet chevelle malibu	buick skylark 320	plymouth satellite	amc rebel sst	ford torino	ford galaxie 500	chevrolet impala	plymouth fury iii	pc cal

9 rows × 398 columns



